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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,421	11/14/2001	Ji Hyun Hwang	MRE-0041	7045
34610	7590	11/16/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			NGUYEN, BINH AN DUC	
			ART UNIT	PAPER NUMBER
			3713	
DATE MAILED: 11/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/987,421	Applicant(s) HWANG ET AL.	
	Examiner Binh-An D. Nguyen	Art Unit 3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36 and 37 is/are allowed.
- 6) ☒ Claim(s) 1-25 and 30-35 is/are rejected.
- 7) ☒ Claim(s) 26-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment filed June 29, 2004 has been received. According to the Amendment, the abstract and specification have been amended; further, claims 1-29 have been amended, and new claims 30-37 have been added. Currently, claims 1-37 are pending in the application. Acknowledgment has been made.
2. In the claims, although the terms "conveyor" and "conveyer" are the same, the applicant is suggested to use only one of the two throughout the claims for consistency.
3. The Amendment filed June 29, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amended feature of "The conveyer **[width]** adjusting rollers 31b and 41b **[are] may be** used for guiding the conveyer guide frames 31a and 41a when adjusting the width of the conveyer guide frames 31a and 41a according to the width of the printed circuit board" (page 12, lines 12-14) introduces new matter to the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

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4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the features of a plurality of transfers being moved in the X and Y axis directions by an X-Y gantry installed on a base frame (page 7, lines 1-4); conveyer width adjusting rollers for guiding the conveyer guide frames when adjusting the width of the conveyer guide frames according to the width of the printed circuit board (page 12, lines 13-19) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The disclosure is objected to because of the following informalities:

The numeral "31b" (Amendment, page 6, line 11) should be changed to "41a"

Appropriate correction is required.

6. Claims 3, 7, 14, and 16 are objected to because of the following informalities:

In claims 3, 7, 14, and 16, line 2, respectively, the recited word "comprise" should be changed to "comprises".

Appropriate correction is required.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-25 and 30-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Freeman et al. (6,572,702).

Freeman et al. discloses surface mounting system and method comprising: a plurality of transfers (infeed and outfeed conveyors) each configured to receive and to transport printed circuit boards; and a plurality of conveyors (512a, 512b)(Figs.7a-7h) configured to receive the printed circuit boards from the plurality of transfers, to transport the printed circuit boards to parts mounting work position (for mounting parts using placement machine 118)(8:29-32; 10:40-43) within the device, and to discharge the printed circuit boards to the plurality of transfers (resulted from both forward and reverse directions of the conveyor system, 9:8-16) when a parts mounting operation is complete; wherein the plurality of transfers comprises a first transfer (infeed conveyor) installed at a first end of a base frame and configured to supply printed circuit boards to at least one of the plurality of conveyors (512a,512b, Fig.7a); and a second transfer (outfeed conveyor) installed at a second end of the base frame (to be moved horizontally in a predetermined direction) and configured to receive the printed circuit boards discharged from at least one of the plurality of conveyors and to transfer the printed circuit boards to an area outside of the surface mounting device (Figs: 7a-7h).

Note, Freeman et al states at column 5, lines 58-62, that the conveyor system used is

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the one disclosed by Doyle (6,032,577) which has first and second transfers each comprises a transfer guide frame (102a, 102b) configured to guide the printed circuit boards; a plurality of transfer rollers (for driving conveyor belts 103a, 103b; Doyle's Figs. 4 and 5) installed at a predetermined interval in side walls of the transfer guide frame and configured to rotate when a rotating motor is driven; and a belt member provided on the plurality of transfer rollers and configured to move in response to the rotation of the plurality of transfer rollers and to receive and carry the printed circuit board; at least one conveyer lifting member (Doyle's 108a, 108b, 110a, 110b) installed on an inner surface of the conveyer guide frame and configured to lift the printed circuit boards for a parts mounting operation and to lower the printed circuit boards upon completion of the parts mounting operation (Doyle, 5:12-62); and a conveyer driving unit (conveyor belts 103a, 103b with driving mechanism; Doyle's Figs. 4 and 5) installed at an inner sidewall of the conveyer guide frame and configured to drive the plurality of conveyor rollers; a first conveyer unit (514a, Fig. 7c) provided on the base frame and configured to move in a predetermined direction and to receive and carry the printed circuit boards (522) supplied from the first transfers (infeed conveyor); and a second conveyer unit (outfeed conveyor, Fig. 7d) provided on the base frame and configured to move in a predetermined direction, to receive the printed circuit boards from the first conveyer unit, and to carry and transfer the printed circuit boards to the second transfer (Figs. 8e-8g; 10:3-36).

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9. Claims 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 36 and 37 are allowed.

11. Applicant's arguments with respect to claims 1-25 and 30-35 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding Freeman not disclosing a system wherein printed circuit boards can be discharged from a first conveyor to a second conveyor (applicant's remark, page 34, lines 2-7; and page 36, line 2-7), and plane motion transfer (applicant's remark, page 35, lines 1-11) are not persuasive. As being addressed above, Freeman et al. discloses surface mounting system and method comprising a plurality of transfers (infeed and outfeed conveyors) each configured to receive and to transport printed circuit boards; and a plurality of conveyers (512a, 512b)(Figs.7a-7h) configured to receive the printed circuit boards from the plurality of transfers, to transport the printed circuit boards to parts mounting work position (for mounting parts using placement machine 118)(8:29-32; 10:40-43). Further, transferring circuit boards horizontally could be considered plane motion transfers (Fig.7d).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh-An D. Nguyen whose telephone number is 571-272-4440. The examiner can normally be reached on Monday-Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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